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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/670,350	09/26/2003	Hideharu Mochizuki	030712-10	5253

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EXAMINER

BROWN JR, NATHAN H

ART UNIT	PAPER NUMBER
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2121

DATE MAILED: 10/02/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/670,350	MOCHIZUKI, HIDEHARU	
	Examiner	Art Unit	
	Nathan H. Brown, Jr.	2121	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE (3) MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 15 September 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-4 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-4 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 26 September 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

Examiner's Detailed Office Action

1. This Office is responsive to application 10/670,350, filed September 15, 2006.
2. Claims 1-4 have been examined.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1, 2, and 3 are rejected under 35 U.S.C. 103(a) as being unpatentable over *Cross II et al.* "Control Structure Diagrams for Ada 95", 1996 in view *Hendrix et al.*, "Visual Support for Incremental Abstraction and Refinement in Ada 95", 1998.

Regarding claim 1. (Currently Amended) *Cross II et al.* teach a graphical interface method in an outline-processor for a computer system (*see Abstract, Examiner interprets CSD to be a graphical interface method in an outline-processor for the computer system GRASP.*) having input means for entering data, data storage means for storing data, and a display screen means for creating, editing and viewing of a program (*see p. 145, col. 1, "The CSD window, shown in*

Art Unit: 2121

Figure 8, is a full-function text editor with the additional capability to generate, display, edit, and print CSDs. The File and Edit options are similar to traditional text editors.”, *Examiner interprets the functions provided by the CSD window to comprise a means for entering data, a data storage means, and a display screen for creating, editing and viewing a program.*).

Cross II et al. do not teach providing a graphical presentation of a program shown as diagram-display having a plurality of outline-display frames connected by lines forming an inverted tree hierarchical structure. *Hendrix et al.* do teach providing a graphical presentation of a program shown as diagram-display having a plurality of outline-display frames connected by lines forming an inverted tree hierarchical structure (see p. 153, Fig. 2, *Examiner interprets the structure of the CSD outline to be an inverted tree hierarchical structure (see Aoyama et al., “Design Specification in Japan: Tree-Structured Charts”, 1989).*).

Cross II et al. do not teach displaying an expanded view on the display screen containing source codes of each respective outline-display frame upon the activation of the expanded view of the respective outline-display frame by an input device so that the source codes of the program is displayed with clarity for viewing, so that the program may be edited, wherein the expanded view of each respective outline-display frame is shown simultaneously on the same display screen as the inverted tree hierarchical structure of the program. However, *Hendrix et al.* do teach displaying an expanded view on the display screen containing source codes of each respective outline-display frame upon the activation of the expanded view of the respective outline-display frame by an input device so that the source codes of the program is displayed with clarity for viewing (see p. 154, col. 1, “A user can select portions of code according to

control structure boundaries, program module boundaries, or arbitrary boundaries, and then fold them into the single CSD symbol shown in Figure 3”, *Examiner interprets “select portions of code” to mean clicking on the CSD folding symbol with a mouse.*), so that the program may be edited (*see p. 155, col. 2, “Users of GRASP have direct visual support for incremental development and stepwise refinement through folded CSDs. Users can create initially folded CSDs to represent regions of code that need refinement or elaboration. As these regions are incrementally refined, they can be individually folded again to reduce the visual clutter and allow the user to focus on the current region of code being developed.”, Examiner interprets “incrementally refined” to mean edited.*), wherein the expanded view of each respective outline-display frame is shown simultaneously on the same display screen as the inverted tree hierarchical structure of the program (*see p. 155, col. 1, Fig. 7*).

Regarding claim 2. (Currently Amended) *Cross II et al.* teach a graphical interface method in an outline-processor (*see above*), further comprising displaying an argument frame in the vicinity of a respective frame shown in the displayed program inverted tree hierarchical structure, wherein the argument frame shows the function of the source codes in each respective frame (*see p. 153, col. 1, Fig. 2, Examiner notes that function “accept REQUEST(p) (D : DATA)” is shown in an argument frame in the vicinity of the respective frame for “task body TASK_NAME”.*).

Regarding claim 3. (Currently Amended) over *Cross II et al.* teach a graphical interface method in an outline-processor (*see above*), further comprising displaying frame lines of each outline-display frame in the program inverted tree hierarchical structure with a first thickness (*see p. 145, Fig. 6, Examiner interprets the “CSD Unit Symbol” for “package specification” to*

have a first thickness.); and displaying frame lines of the expanded view of each respective outline-display frame with a second thickness that is thicker than the first thickness (see p. 145, Fig. 5, Examiner interprets the "CSD Box Notation" for "package specification" to have a second thickness that is thicker than the first thickness.).

It would have been obvious at the time the invention was made to persons having ordinary skill in the art to combine *Cross II et al.* with *Hendrix et al.* to improve the comprehension efficiency of software and, as a result, improve reliability and reduce costs during design, implementation, testing, maintenance and reengineering.

5. Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over *Cross II et al.* in view of *Hendrix et al.*, "Providing Enhanced Visual Support for Software Development and Maintenance", 1998.

Regarding claim 4. (Previously Presented) *Cross II et al.* teach a graphical interface method in an outline-processor (see above). *Cross II et al.* do not teach displaying a most recently activated expanded view of the respective outline-display frame on top of other expanded views of outline-display frames. *of Hendrix et al.* do teach displaying a most recently activated expanded view of the respective outline-display frame on top of other expanded views of outline-display frames (see p. 25, col. 2, Fig. 6, Examiner interprets Fig. 6 to show an expansion of *conversion_test* into *base_conversion.abd* and *conversion_test.abd*, where *conversion_test.abd* is the most recently activated expansion and overlaps *base_conversion.abd*.).

It would have been obvious at the time the invention was made to persons having ordinary skill in the art to combine *Cross II et al.* with *Hendrix et al.* to provide automatic visualization of software control structure and complexity to support development, maintenance, reverse engineering, and reengineering.

Response to Arguments

Applicant's arguments with respect to claims 1-4 have been considered but are moot in view of the new ground(s) of rejection.

Correspondence Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Nathan H. Brown, Jr. whose telephone number is 571-272- 8632. The examiner can normally be reached on M-F 0830-1700. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Anthony Knight can be reached on 571-272-3687. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more

Art Unit: 2121

information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Anthony Knight
Supervisory Patent Examiner
Tech Center 2100

Nathan H. Brown, Jr.
September 27, 2006